NC/QC/DD-MW-13/2018-19/SN-DM2 Date: 18-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.52 %**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	100	100
26.5	98.65	90-100
19.0	85.20	71-95
13.20	74.70	56-80
4.75	41.95	38-54
2.36	38.45	28-42
0.300	9.15	7-21
0.075	5.60	2-8

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ಪಾಯಕ ಕಾಯ್ದೆಯಲ್ಲಿರುವ ಅಪರಾಧಗಳಿಗೆ ದಂಡ ವಿಧಿಸುವ ಬಗ್ಗೆ ಮಾಹಿತಿ ಬಿಬಿಎಂಪಿ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ ಎಸ್.ಎಂ. ಕಸ್ತೂರಿ ಪಬ್ಲಿಕ್ ಸ್ಕೂಲ್ ಬೆಂಗಳೂರು

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NC/QC/DD-MW-13/2018-19/SN-DS2

Date: 19-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1264	900
2	Marshall Flow at 60°C, mm.	3.09	2.0 - 4.0

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ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
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ಬಿ.ಬಿ.ಎಂ.ಪಿ, ಬೆಂಗಳೂರು.

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NC/QC/DD-MW-13/2018-19/SN-BB1

Date: 16-03-2019

1. TEST REPORT ON BITUMEN SAMPLE:

Sub: Testing of Bitumen sample VG-30 Grade used in Bituminous Concrete.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.
Technical Reference: Ministry of Road Transport and Highways, V Revision, 2013 and IS 73: 1992.

TABLE 1.1 ;

SL No	Details	Test Results	Requirements as per I.S 73 –1992 Specifications
1.	Penetration at 25^0 C	**51.80^0 C**	Min. 45
2.	Ductility Value at 25^0 C	**118 cm**	40
3.	Flash point	**242^0 C**	Minimum 220^0 C
4.	Softening point	**52.10^0 C**	Min. 47

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ಸಹಾಯಕ ಕಾರ್ಯನಿರ್ವಾಹಕ ಅಭಿಯಂತರರು
ಶಿಬಿರ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಯಶ್ವಂತಪುರ, ಬೆಂಗಳೂರು-57.

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NC/QC/DD-MW-13/2018-19/SN-CB1

Date: 16-03-2019

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19.

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS:383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	22.90 %	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	27.35 %	Not more than 35.0 %
3.	Water absorption, %	0.37 %	Not more than 2.0 %
4.	Specific gravity	2.61	-------
5.	Soundness	6.68 %	Max. 12 % in Sodium Sulphate

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NC/QC/DD-MW-13/2018-19/SN-BC1 Date: 19-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :

(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.

{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42 %**

2. Gradation Test

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	100	100
13.2	97.10	90-100
9.5	84.90	70-88
4.75	66.35	53-71
2.36	50.30	42-58
1.18	44.75	34-48
0.600	31.20	26-38
0.300	20.70	18-28
0.150	14.10	12-20
0.075	7.65	4-10

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NC/QC/DD-MW-13/2018-19/SN-BS1

Date: 20-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1357	900
2	Marshall Flow at 60°C, mm.	2.96	2.0 - 4.0

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NC/QC/DD-MW-13/2018-19/SN-BC2

Date: 19-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**

1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41 %**

2. Gradation Test

TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	**100**	100
13.2	**96.80**	90-100
9.5	**89.05**	70-88
4.75	**59.10**	53-71
2.36	**55.45**	42-58
1.18	**39.65**	34-48
0.600	**31.20**	26-38
0.300	**25.90**	18-28
0.150	**17.10**	12-20
0.075	**6.45**	4-10

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NC/QC/DD-MW-13/2018-19/SN-BS2 Date: 20-03-2019

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Name of work: Improvements of Asphalting At 6th,7th And Others Roads Santhoshnagara in Mallasandra Ward No 13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Shettyhalli Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M/s Technical Manager (West), KRIDL.

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1367	900
2	Marshall Flow at 60°C, mm.	3.41	2.0 - 4.0

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